

2016年度学院留学 研究成果概要

種 別：学院留学（短期）

所属・職・氏名：商学部・教授・阪 智香

研究課題：CSR・統合報告書における非財務情報開示等に関する国際的研究

留学期間：2016年8月1日～2017年3月28日

留学先：国・都市 アメリカ・カリフォルニア州・アーバイン

研究機関 University of California, Irvine (UCI), The Paul Merage School of Business

研究成果概要

留学期間中の研究成果は、次の2つの論文にまとめ、2本とも国際ジャーナルへの掲載が決定した。

1. Saka, C. and Oshika, T. (2017) Sustainability KPIs for Integrated Reporting, *Social Responsibility Journal*, forthcoming.
2. Saka, C. and Jimichi, M. (2017) Evidence of Inequality from Accounting Data Visualisation, *Taiwan Accounting Review*, Vol. 13, forthcoming.

研究成果概要として、各論文の要旨を次に記す。

1. Sustainability KPIs for Integrated Reporting

Worldwide inequality has grown to the point where it can no longer be ignored (Stiglitz, 2012). It is necessary to recalibrate and restructure the economy, to make it more equal (Reich, 2010). However, hardly any literature exists on inequality in the accounting field. One of the reasons the literature on accounting does not discuss the inequality issue is that there is no solid evidence of inequality. To demonstrate such evidence, this paper adopted the research methodologies of exploratory data analysis with visualisation, using accounting big data.

Thus, this paper first examined the emergence of big businesses of sizes greater than small- and medium-sized developing economies. Thereafter, to confirm the forces of divergence, Piketty's (2014) principle was examined. This states that the rate of return on capital remains significantly above the growth rate ($r > g$). Then, the data visualisation methodology was used to illustrate the existing global situation regarding firms' wealth. Visualisation is the fastest way to communicate and assess information. Data visualisation can help us see the world in a new way, revealing unexpected patterns and trends in otherwise hidden information. Although the importance of the visual approach in accounting and accountability is discussed in the literature (e.g. Davison and Warren, 2009), visual designs have received limited attention within the accounting literature. In addition, the existing accounting literature considers visual representation, not visualisation. To date, no study has used data visualisation in tandem with world-scale accounting big data. Thus, this paper examined the inequality issue from several accounting perspectives and illustrated the evidence using data visualisation tools. Consequently, this paper provided much-needed evidence regarding the following.

(1) The size of big businesses is greater than that of small- and medium-sized developing economies. Under this situation, their business activities affect society and people's lives more significantly than ever before. Although the power of markets is enormous, they have no inherent moral character (Stiglitz, 2012). As accounting involves calculating the firm's wealth and income as well as their distribution among stakeholders, there is a need to expand the scope of accounting research to alleviate the inequality issue.

(2) Inequality $r > g$ exists from the accounting perspective. In this regard, data of three kinds of ROE (PL before tax, PL after tax, and net income) for r , and the sales' growth rate for g , of the listed firms of 140 countries from 1985 to 2013 were used. As the 29-year average rate of all three r s ranges from 14% to 22%, and the rate of g is 6.8%, it is clear that $r > g$. However, when markets are competitive, profits above normal return to capital cannot be sustained. Preferably, efforts are made to make the markets less transparent in order to earn excess returns. However, there are many other tools too, such as taking advantage of information asymmetries. These cause market failure, and markets have clearly not been working in the way that their supporters claim. Thus, the question arises as to how one should divide these excess returns among the various stakeholders in a firm (Stiglitz, 2012). Accounting can help answer this question (e.g. Oshika and Saka, 2016).

(3) Hyper-concentrated wealth exists among countries worldwide from the accounting perspective. Although this paper presents snapshots of Motion Chart as figures presented on paper, Motion Chart is originally an interactive dynamic visualisation tool, which automatically covers the time period from 1985 to 2013 in this case, to indicate the sequential results for each country and each year. Motion Chart provides visual evidence of hyper-concentrated wealth across five dimensions: sales, net income (or number of employees), total assets, countries, and changes across years. Only a few countries, such as the US, China, and Japan, have moved to the upper middle or right-hand side of the chart; all the other countries have stayed on the lower left-hand side even in 2013, which means that hyper-concentrated wealth exists among countries worldwide.

(4) Inequalities of firms' wealth are greater than inequalities of firms' income. Although snapshots of Geo Chart are depicted as figures presented on paper, Geo Chart is originally an interactive dynamic visualisation tool. In this paper, it automatically covers the time period from 1985 to 2013 to sequentially indicate each year's result. The results of Geo Chart provide visual proof of Stiglitz's (2012) contention that inequalities of wealth are greater than inequalities of income from the firms' perspective.

(5) Inequality in firms' wealth is greater than inequality in individual wealth. The sales of the top 1% (10%) of firms represent more than 42 to 48% (83 to 87%) of total listed firms' sales worldwide. The level of inequality in the US is almost the same or more extreme than the worldwide level. The level of inequality in China increased from 2000 to 2013. Even though the level of inequality in Japan is moderate, firms' inequality levels in these three countries and worldwide are greater than individual inequality levels in Piketty (2014).

The existence of such inequality may be attributed in part to market failure when competition is imperfect; for example, the existence of imperfections or information asymmetries. Asymmetries arise from adverse selection and moral hazard. Markets can also concentrate wealth, pass environmental costs on to society, and abuse workers and consumers. The problem is not that globalisation is bad or wrong but that governments are managing the situation poorly – and largely for the benefit of special interests. Stiglitz (2012) points out that the political system of the US gives inordinate power to those at the top. Such people have used this power not only to limit the extent of redistribution but also to shape the rules of the game in their favour and to extract wealth from the public. Economists call these activities rent seeking, which refers to obtaining income not as a reward for creating wealth but by grabbing a larger share of the wealth, which would otherwise have been produced without their effort.

According to Sen (1992), 'a common characteristic of virtually all the approaches to the ethics of social arrangements that have stood the test of time is to want equality of something – something that has an important place in the particular theory'. Unequivocal impact of the shareholder value paradigm on industrial relations leads to a rise in social inequality (Palea, 2016). Various stakeholders have competing interests and the decisions of

firms all too often neglect the interests of stakeholders apart from their shareholders. The successful design, application, and evaluation of accounting information system in the social and environmental accounting domains increasingly require that stakeholder interests be addressed. Co-operative action is the need of the hour, to address the power and resource inequalities in sustainability conflicts (Thomson, 2014).

There is wide-ranging recognition of the need for ‘new accounting’ that fosters democracy among stakeholders and facilitates more participatory forms of organizations. Accounting could redress the ‘winner takes all’ (Atkinson, 2015) situation, if accounting systems are in place to ensure that the economic benefits of globalization are shared by everyone. Interestingly, our results for Japan show that the degree of inequality is more moderate for this country than worldwide, and compared to the US and China. In this regard, Oshika and Saka (2016) demonstrate that Japan has the largest number of long-lived firms in the world, and the value added distribution among stakeholders is a useful indicator to distinguish firms’ sustainability. Researchers in the accounting domain should revisit the issues of wealth distribution and how returns are shared among stakeholders, to correct the currently experienced inequality and to promote sustainability.

2 . Evidence of Inequality from Accounting Data Visualisation

Integrated reporting promotes efficient and productive capital allocation, acting as a force for sustainability. However, the current situation suggests that many integrated reports merely “connect” financial and sustainability information, and that KPIs for sustainability are lacking. Although there is prior research on KPIs for sustainability reporting, it is difficult to find KPIs that ensure firms’ sustainability, as they require a period of experimentation long enough to be considered an accurate indication of sustainability. However, KPIs for integrated reporting are critically necessary because the IIRC framework is principles-based and does not provide specific KPIs. Thus, we employ a research design that differs from prior studies in its focus on sustainable firms that have survived for more than 100 years. Then, we analyze these firms to reveal the financial features that distinguish sustainable firms and other firms, and we propose these features as KPIs for integrated reporting.

In our analysis, we turn our attention to the management philosophy of sustainable Japanese firms, which, because it emphasizes “providing satisfaction to stakeholders,” hints at the way that sustainability is achieved. This management philosophy matches the IIRC framework in its emphasis on considering the legitimate needs and interests of key stakeholders. Value added provides information that can show how firms “provide satisfaction to stakeholders” from a financial perspective. Although a theoretical discussion of the usefulness of value added as an integrated reporting instrument is presented in Haller and van Staden (2014), the authors offer no evidence to show whether value added information is actually useful in judging a firm’s financial stability and sustainability.

Thus, our study provides the first evidence that information about value added distribution is actually useful to evaluate a firm’s sustainability. We focus on sustainable firms and analyze these to reveal the financial features that distinguish sustainable firms and other firms. We find that sustainable firms and other firms have two distinguishing features—different value added distributions and different degrees of stability in profitability.

Our first result shows that value added distribution is useful for deciphering a firm’s sustainability because the value added distributed to stakeholders other than shareholders is significantly larger in sustainable firms. Thus, we propose value added distribution as a sustainability KPI for integrated reporting.

However, value added distribution deals with shareholders as just one of many groups of stakeholders. As a primary goal of integrated reporting is to explain to providers of financial capital how an organization creates

value (IIRC, 2013), firms should also satisfy shareholders. Stability of profit generates financial returns to the providers of financial capital and helps such providers, shareholders, to judge a firm's financial stability and sustainability. Our second result shows that information on the stability of profitability is also useful for deciphering a firm's sustainability because stability of profitability is significantly higher in sustainable firms. Thus, we propose stability of profitability as a sustainability KPI for integrated reporting.

Nevertheless, concern for profits is the result rather than the driver in the process of value creation (Freeman *et al.*, 2004), we propose that value added information is a primary KPI and stability of profitability is a secondary KPI for integrated reporting. These two KPIs are significant indicators of firms' sustainability for stakeholders and shareholders, an idea similar to that proposed in the Integrated Reporting Framework (IIRC, 2013)

以上

研究成果概要のデータは、gakunai@kwansei.ac.jpまで提出してください。